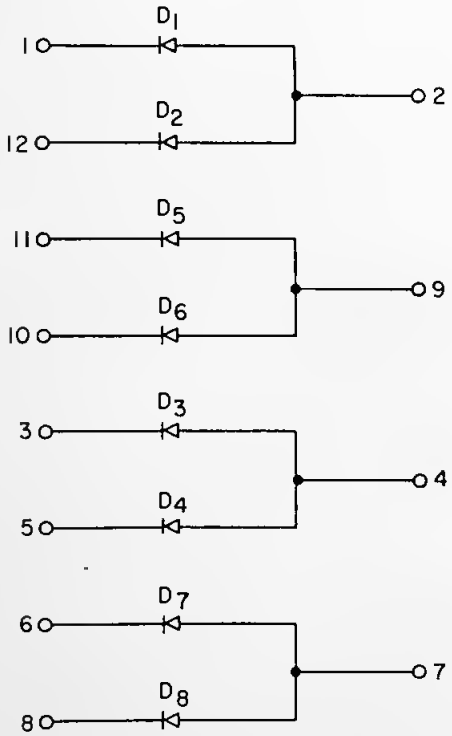
FOUR DUAL DIODES (FDD-1C)
MODULE P/N 841599

IBM INDUSTRIAL PRODUCTS

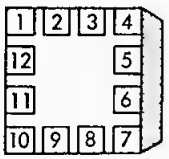
Functional Description

The FDD-1C module contoins four duol diodes with common onodes between pairs. All of the individual cathodes plus the four paired onodes are connected to the module pins thereby ollowing flexibility in opplicotions for the circuit designer. The diodes con be used for clomps and "AND" extends.

Schematic



Terminal Configuration



Mechanical Chamfer Right Side

Maximum Ratings

Maximum Current = 5.0ma
Diode Breakdown Voltage = 13V

FDD-1C Module Functional Tests

INDIVIDUAL DEVICE PARAMETER TESTS						
TESTS	COM-PONENTS	TEST CONDITIONS	T °C	LIMITS MIN	LIMITS MAX	UNITS
Q_S	$D_1 - D_8$	I_F = 3.0ma SEE FIG 1	25		33	PC
V_P	$D_1 - D_8$	I_F = 2.0ma SEE FIG. 2	25		1.0	V
V_F	$D_1 - D_8$	I_F = 0.10ma	25	0.51		V
V_F	$D_1 - D_8$	I_F = 1.0ma	25		0.80	V
V_F	$D_1 - D_8$	I_F = 2.0ma	25		0.88	V
V_F	$D_1 - D_8$	I_F = 5.0ma	25		1.0	V
BV_R	$D_1 - D_8$	I_R = 0.01ma	25	13		V
I_R	$D_1 - D_8$	V_R = 12.0V	75		1.0	μa
DIODE CAPACITANCE	$D_1 - D_8$	OV BIAS, f = 1.0 ±0.5mhz AC SIGNAL ≤ 50mv P-P	25		3.5	pf

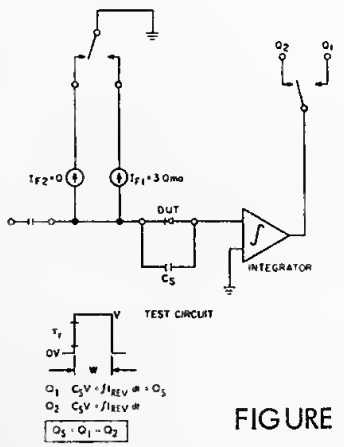


FIGURE 1

Store Charge Test

V-PULSE AMPLITUDE: 5V ± 25%
W-PULSE WIDTH: > 50ns
RISE TIME: 1% - 50% < 0.5ns
10%-90% < 0.4ns
SOURCE IMPEDANCE < 10 OHMS
I_{F1} -FORWARD CURRENT = 3.0ma ± 0.3%
I_{F2} -FORWARD CURRENT = 0ma
C_S - SHUNT CAPACITY < 50 pf
INTEGRATOR RESPONSE ≥ 1ns
Q_1 -CHARGE WHEN D.U.T. IS FORWARD BIASED WITH I_{F1} = 3.0ma
Q_2 -CHARGE WHEN D.U.T. IS FORWARD BIASED WITH I_{F2} = 0ma
Q_S - STORED CHARGE
I_{REV} -DIODE LEAKAGE CURRENT

Forward Recovery

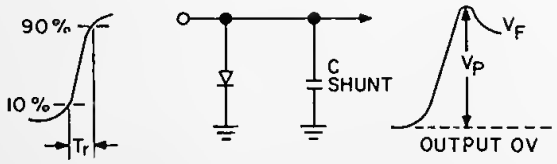


FIGURE 2

Notes

For this test the diode shunt capacity (incl Probe) shall be 10.5 ±1 pf with a 50Ω HF Resistor in place of the Diode, the rise time, tr, of the input voltage wave form shall be ≤ 2 ns, the operating frequency ≤ 50khz, pulse width ≤ 50ns, Bandwidth of detector ≥ 750mhz.
Turn on is from Vf = 0.